Anthony D. Minkoff Microsoft ATR From: To: Date: 1/9/02 3:50am

Subject: Microsoft Settlement

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INTRODUCTION

My name is Anthony D. Minkoff. I am a professional software engineer. I am not a direct party to this lawsuit, nor do I have any business relationships with any party to this lawsuit, except as a customer. I do use Microsoft software in my home and in my work, and my job consists of developing application software that runs on Microsoft's "Windows" family of operating systems. I am a citizen of the United States of America.

I claim no expertise in relevant legal or economic issues. My only claims to expertise in relevant technical issues are those that are described above?that I am a professional developer of software applications for Microsoft operating systems and a user of Microsoft products.

My interest in the case follows from the same considerations, and from the fact that I am a citizen of the United States of America.

I'll briefly describe my personal opinion of the proposed settlement, and then offer a proposal of my own for consideration.

COMMENTS ON PROPOSED SETTLEMENT

DUBIOUS EFFECTIVENESS

One concern that I have is that the proposed settlement would be ineffectual in curbing future monopolistic behavior by Microsoft. This concern has been expressed by others who are undoubtedly more knowledgeable and eloquent than I, so I recommend that the reader refer to other available comments and briefs for detailed analysis of this point. I mention it merely to convey that I share the concern.

LACK OF PUNITIVE PROVISIONS

Another concern I have is the apparent lack of any punitive provisions in the settlement.

As I have stated, I am not knowledgeable of the legal issues, and don't know whether the law calls for punitive remedies, but as a consumer and a citizen I am concerned about their absence. It seems to me that, when laws have been violated, it is essential that the remedies do not leave the violator better off for having committed the violation. The remedy must either prevent the violator enjoying the benefits of the transgressions already committed, or impose punishments that exceed the benefits.

In this case, it has been found that Microsoft's current monopoly power is at least partly a result of past monopolistic abuses. So, even assuming that the proposed settlement would successfully prevent future monopolistic abuses by Microsoft, it seems insufficient. I think it's also necessary that Microsoft be punished for, or denied the benefits of, the abuses that it has already committed.

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A PROPOSAL

The proposal that I am about to describe would, I believe, protect the interests of consumers and competitors, while at the same time protecting Microsoft's rights to innovate, to compete, to profit according to the value of its production, and even to continue to dominate the industry. I will describe the proposal, and then describe why I believe it would be beneficial to consumers and competitors while protecting for Microsoft the legitimate benefits of its production.

Despite my expressed concerns about the lack of punitive provisions in the existing settlement, this proposal is not punitive in intent. The harm to Microsoft would be moderate, and would consist essentially of fostering competition where Microsoft has historically enjoyed a lack of competition.

I would like the parties to consider the ideas contained in this proposal, and consider incorporating them into a revised settlement. I would like the court to consider the ideas contained in this proposal when fashioning court-ordered remedies.

DESCRIPTION OF THE PROPOSAL

The proposal is that, in areas in which Microsoft has been found to have abused monopoly power, its software come under a "Delayed Open Source License" ("DOSL"). The relevant areas certainly include operating systems, internet browsers, and Microsoft's "Office" software, and possibly others as well.

In a DOSL, software would become open source four years from its date of publication [Notel]. For example, "Windows NT 4," "Windows 98," and earlier versions of Windows would become open source immediately; "Windows 2000" some time in late 2003 or early 2004; "Windows Millennium Edition" in 2004; "Windows XP" in 2005; and future versions of Windows four years from the dates of their initial publication.

When a product becomes open source under this rule, its source code (including internal documentation, test plans, etc.) would be made available to the public for free or for nominal cost [Note2]. Under the terms of the DOSL, other parties would be permitted to create and publish derivative works; any such derivative works would also fall under DOSL? that is, four years from the publication of the derivative work, the derivative work becomes open source, etc.

HOW CUSTOMERS AND COMPETITORS BENEFIT FROM THE PROPOSAL

Microsoft currently enjoys barriers to competition that can be conservatively described as enormous, and fairly described as insurmountable.

There is a vast library of software available that runs on Windows operating

systems. (I have participated in the development of a number of such applications myself.) Many web sites are compatible only with Microsoft's "Internet Explorer" browser, and many are compatible only with browsers running on Windows.

A similar phenomenon affects "wetware". Millions of technicians have expertise in diagnosing, maintaining, and repairing systems running Windows or other Microsoft software. Developers have experience developing software to run on Microsoft's operating systems and developing web sites to work well with Microsoft's browsers. Hundreds of millions of users worldwide have experience using Microsoft software.

Only Microsoft is in any position to take advantage of all the software and expertise that has been created around Microsoft's products. This is the "positive feedback loop" that is partly described in the Findings of Fact.

As part of a remedy for the monopolistic behavior, therefore, we want to give potential competitors a chance to enter that loop. The ability to base development on older versions of Windows (or Internet Explorer, Office, etc.) creates that possibility. It will make it possible to develop software that can take advantage of third-party products that work with Microsoft products, of technicians' expertise with Microsoft products, and of users' experience with Microsoft products.

When other parties have an opportunity to enter the loop, Microsoft will be unable to wield its exclusive position as a weapon. For example, one of the abuses found in this case is Microsoft's threat to devastate Apple by refusing to continue to develop Office for Apple's "Mac OS" operating system. Under this proposal, Apple would be able to respond to such a threat by continuing to develop Office itself, basing its own development on the source code of "Office 98" [Note3]. The existence of this viable alternative for Apple would prevent Microsoft from exacting draconian terms as a condition of the continued development of Office for Mac OS. It would also protect Apple in the event that Microsoftls continued development of Office for Mac OS is of poor quality.

Customers would benefit directly from this increased competition, since competing offerings would increase customer choice. Furthermore, if a third party develops a competing version of a Microsoft product with features that prove popular, Microsoft will have an opportunity to incorporate similar features into future versions of its own offerings, potentially leading to better quality products from Microsoft.

Other customer benefits of open source software have been extensively discussed, and I refer the reader to http://www.opensource.org for papers on this topic.

HOW THE PROPOSAL PROTECTS MICROSOFT'S RIGHT TO PROFIT FROM ITS PRODUCTION

An important quality of any remedy is fairness to Microsoft, and this proposal is fair.

Consider, as an example, Windows XP, which Microsoft advertises as a dramatic improvement over earlier versions of Windows. For the sake of this discussion, we assume that Microsoft's claim in this regard is accurate.

Since Windows XP is a dramatic improvement over earlier versions of Windows, demand for it should withstand the open source release of Windows NT 4 and Windows 98. A free copy of Windows NT 4 or Windows 98 is not an effective substitute for Windows XP.

A third-party developer may be able to use the Windows NT 4 source code as a

basis from which to develop its own operating system to compete with Windows XP, or may wait for Windows 2000 to be become open source and use that as the basis for development. However, it took Microsoft two years to develop Windows XP from Windows 2000, despite employing the very individuals who had created Windows 2000 in the first place and who therefore understood its source code and architecture better than anyone. (Starting from Windows NT 4, it took more than five years to develop Windows XP.) Presumably, a competing developer, beginning at a similar starting point after the publication of Windows 2000's source code, would require a similar amount of time to develop a product capable of competing in the market against Windows XP.

By that time, given the historical rate of development of operating systems, Microsoft will have released a successor to Windows XP, and perhaps even a second successor. If the successor is a significant improvement over Windows XP, then the successor should enjoy success in the marketplace against a competing product that has only just become able to compete with XP.

As another example, consider the possibility, as described above, of Apple creating its own version of Office based on the source code from Office 98. Apple1s offering in this regard would be four years behind what Microsoft is able to develop, so it would clearly be in Apple1s interests to negotiate for continued development of the software by Microsoft. Apple would resort to developing its own version only if (1) it is unable to negotiate fair terms with Microsoft, (2) Microsoft fails to demonstrate a commitment to quality in continued development of Office, or (3) Apple simply feels that it can do a much better job than Microsoft despite Microsoft1s four-year head start. In any case, so long as Microsoft continues to develop and sell Office for Mac OS; so long as it continues to add value to the product, Apple1s competing version shouldn1t be much of a threat to Microsoft1s version.

This same line of reasoning applies to all of the product areas under consideration. As long as Microsoft continues to add value to its products, it will be able to continue selling current products, even while old versions of the products are available for free. As long as it continues to develop these improvements with reasonable efficiency, a four-year developmental head start will ensure Microsoftls ability to stay ahead of competing developers and to continue to dominate the industry.

However, a remedy incorporating the ideas of this proposal would weaken Microsoftls ability to dominate the industry simply by virtue of exclusive compatibility with the technology and knowledge that others have built around Microsoft software. That is, Microsoft won't be able to depend on its monopolistic position to lock out competition altogether. While Microsoft would undoubtedly feel harmed by this, it is clearly not undue harm. It is fair, and consistent with the intent of the antitrust laws.

NOTES

NOTE1: I assume a four-year delay for the purpose of this discussion; while a remedy could provide for a delay of different extent, I believe that a three- or four-year deal is optimal. I leave open the question of whether a "public beta" qualifies as publication. I also leave open the challenge of constructing provisions to ensure that Microsoft can not circumvent of the determination of a "publication" date by, for example, making the software available only to members of certain private organizations that between them happen to include just about anybody who would want to join. Other enforcement provisions would include escrow of the source code to ensure that Microsoft doesn't somehow "lose" it before publication.

NOTE2: Special provisions may be made for parts of the code related to strong cryptography. Such parts would be made available only to citizens of the U.S. I understand that it is a violation of federal law to export strong cryptography capabilities or to make it available to foreign nationals. There may be other special cases as well, but nothing that would prevent the code as a whole from being used to build the target software or a reasonable facsimile thereof.

NOTE3: Apple does produce a business productivity software suite, called "AppleWorks," which in some ways does compete with Microsoftls Office. However, this is not quite a substitute for Office. For one thing, it is a less expensive, less featured product than Office, and targeted at a different class of customer. (In this way, it is more comparable to Microsoftls "Works" software than to Office.) AppleWorks can not be used to work with Office documents directly. (It is possible to use a "converter" to translate Office documents to AppleWorks documents and vice versa, so long as the documents don't use features that are unique to one product or the other. This is a less-than-ideal solution when one needs to exchange documents with Office users.) Finally, simply because it is a different product, it is not possible for AppleWorks to take advantage of all the existing "wetware" built around Office. Whether or not AppleWorks is inherently comparable to Office, it is not Office, and therefore suffers from "network effects" in an Office-dominated world.